L4 ANSWER [illegible] MEDLINE
ACCESSION NUMBER: [illegible] MEDLINE
DOCUMENT NUMBER: [illegible]
TITLE: [illegible] **exosomes** [illegible] secreted [illegible] for antitumor **vaccine** therapy [illegible]
[illegible]
AUTHOR: [illegible]
SOURCE: [illegible]
[illegible]
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LANGUAGE: [illegible]
FILE SEGMENT: Priority Journals [illegible]
ENTRY MONTH: [illegible]
ENTRY WEEK: [illegible]

L4 ANSWER [illegible] MEDLINE
ACCESSION NUMBER: [illegible] MEDLINE
DOCUMENT NUMBER: [illegible]
TITLE: Eradication of established murine tumors using a novel cell-free **vaccine**: dendritic cell-derived **exosomes**.
AUTHOR: Zitvogel L; Regnault A; Lozier A; Wolfers J; Flament C; Tenza D; Ricciardi-Castagnoli P; Raposo G; Amigorena S
CORPORATE SOURCE: CNRS URA [illegible], Institut Gustave Roussy, Villejuif, France.
SOURCE: NATURE MEDICINE, (1998 May) 4 (5) 594-600.
Journal code: [illegible] ISSN: [illegible]
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AB Dendritic cells (DCs) are professional antigen presenting cells with the unique capacity to induce primary and secondary immune responses in vivo. Here, we show that DCs secrete antigen presenting vesicles, called **exosomes**, which express functional Major Histocompatibility Complex class I and class II, and T-cell costimulatory molecules. Tumor peptide-pulsed DC-derived **exosomes** prime specific cytotoxic T lymphocytes in vivo and eradicate or suppress growth of established murine tumors in a T cell-dependent manner. **Exosome**-based cell-free **vaccines** represent an alternative to DC adoptive therapy for suppression of tumor growth.

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TITLE: B lymphocytes secrete antigen-presenting vesicles.

AUTHORS: Raposo G; Nijman HW; Stoorvogel W; Liejendekker R; Harding CV; Melief CJ; Geuze HJ

AUTHOR AFFILIATION: Department of Cell Biology, Faculty of Medicine and Institute for Biomembranes, Utrecht University, The Netherlands.

SOURCE: J Exp Med 1996 Mar 1;183(3):1161-72

CITATION IDS: PMID: 8642258 UI: 96228337

ABSTRACT: Antigen-presenting cells contain a specialized late endocytic compartment, MIIC (major histocompatibility complex [MHC] class II-enriched compartment), that harbors newly synthesized MHC class II molecules in transit to the plasma membrane. MIICs have a limiting membrane enclosing characteristic internal membrane vesicles. Both the limiting membrane and the internal vesicles contain MHC class II. In this study on B lymphoblastoid cells, we demonstrate by immunoelectron microscopy that the limiting membrane of MIICs can fuse directly with the plasma membrane, resulting in release from the cells of internal MHC class II-containing vesicles. These secreted vesicles, named exosomes, were isolated from the cell culture media by differential centrifugation followed by flotation on sucrose density gradients. The overall surface protein composition of exosomes differed significantly from that of the plasma membrane. Exosome-bound MHC class II was in a compact, peptide-bound conformation. Metabolically labeled MHC class II was released into the extracellular medium with relatively slow kinetics, 10 +/- 4% in 24 h, indicating that direct fusion of MIICs with the plasma membrane is not the major pathway by which MHC class II reaches the plasma membrane. Exosomes derived from both human and murine B lymphocytes induced antigen-specific MHC class II-restricted T cell responses. These data suggest a role for exosomes in antigen presentation in vivo.